HCD-H51/H51K

SERVICE MANUAL

E Model
Australian Model

HCD-H51 and HCD-H51K are the tuner, deck, CD and amplifier section in FH-B500 and FH-B500K respectively.

Photo:HCD-H51K

CD Section	Model Name Using Similer Mechanism	HCD-H170/H170K/H700
	CD Mechanism Name	CDM13B-5BD4E
	Base Unit Name	BU-5BD4E
Deck Section	Model Name Using Similar Mechanism	HST-H1750
	Tape Transport Mechanism Type	TCM-210W2

SPECIFICATIONS

Tuner section
FM stereo, FM/AM superheterodyne tuner

FM tuner section
Tuning range 87.5 – 108.0 MHz
Antenna Telescopic antenna
Antenna terminals 75 ohm unbalanced
Intermediate frequency 10.7 MHz

AM tuner section
Tuning range
MW: 531 – 1,602 kHz (at 9 kHz step)
MW: 530 – 1,710 kHz
(at 10 kHz step except for Middle Eastern model)
SW: 5.95 – 17.9 MHz
Antenna AM loop antenna
External antenna terminals
Intermediate frequency 450 kHz

Amplifier section
Peak music power output:
300 watts
Continuous RMS power output:
30+30 watts (6 ohms at 1 kHz, 5% THD)
Inputs
For FH-B500 MIX MIC (minijack):
Sensitivity 1 mV,
impedance 600 ohms
VIDEO/AUX (phono jack):
sensitivity 250 mV,
impedance 47 kilohms
For FH-B500K MIX MIC 1, 2 (minijack):
Sensitivity 1 mV,
impedance 600 ohms
VIDEO/AUX (phono jack):
sensitivity 250 mV,
impedance 47 kilohms
Outputs
HEADPHONES (stereo minijack):
accept headphones of 8 ohms or more.
SPEAKERS: accept impedance of 6 to 16 ohms.

Cassette deck section
Recording system
4-track 2-channel stereo
Frequency response
(DOLBY NR OFF)
60 – 13,000 Hz (±3 dB),
using TYPE I
cassette (Sony HF-S)
60 – 14,000 Hz (±3 dB),
using TYPE II
cassette (Sony UX-S)
Wow and flutter
0.1% WRMS

Compact disc player section
System Compact disc digital audio system
Laser Semiconductor laser
Wavelength 780 nm – 790 nm

General
Power requirement
110V-120V/220V-240V AC,
adjustable, 50/60Hz (EXCEPT AUS)
240V AC, 50Hz (AUS)

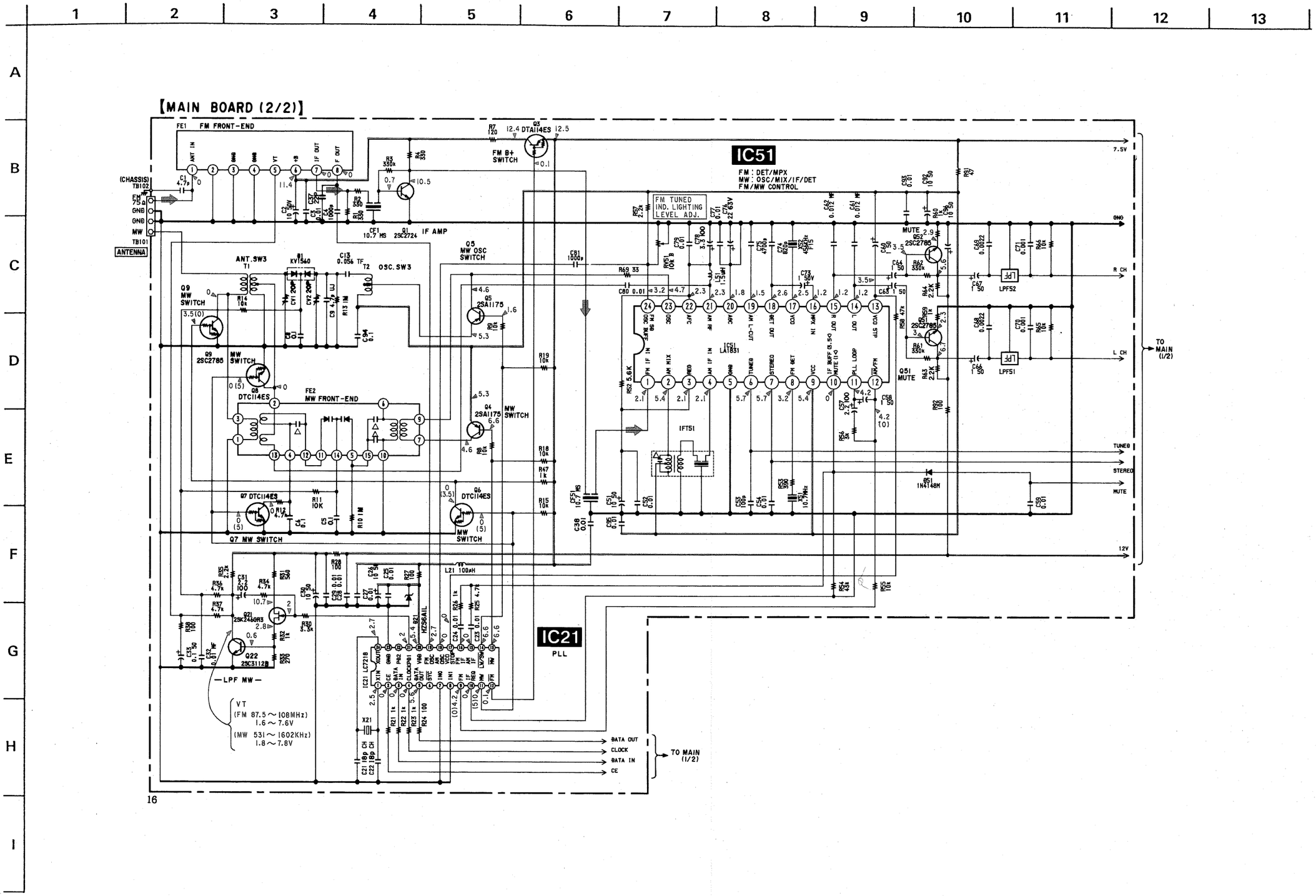
Power consumption 90 W
Dimensions
Approx. 225 x 285 x 265 mm (w/h/d)
incl. projecting parts and controls
Mass Approx. 5.5 kg

Design and specifications subject to change without notice.

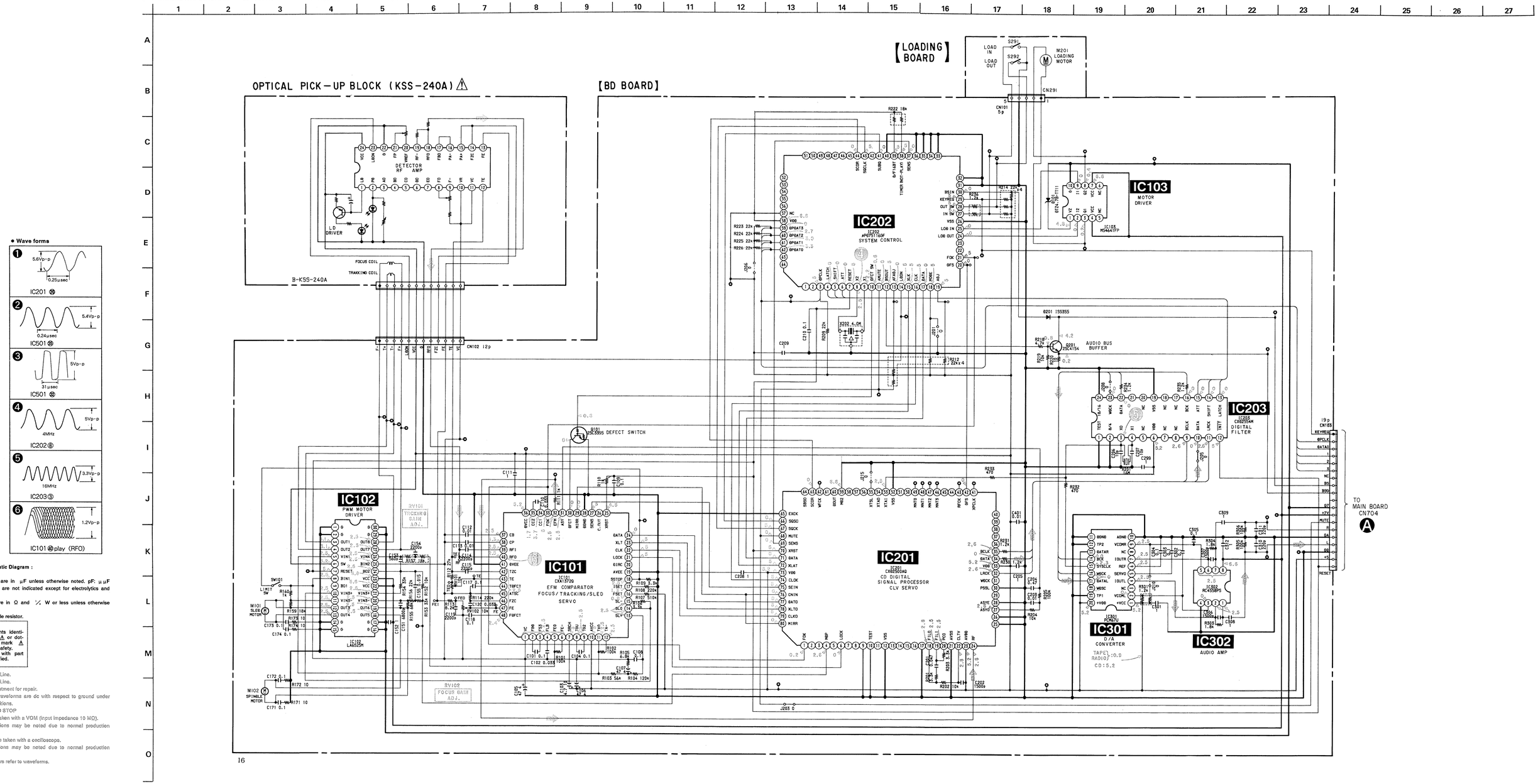
COMPACT DISK DECK RECEIVER

SONY®

6-3. SCHEMATIC DIAGRAM — TUNER SECTION —



6-4. SCHEMATIC DIAGRAM — BD SECTION — • See page 39 for IC Block Diagrams.



• Wave forms

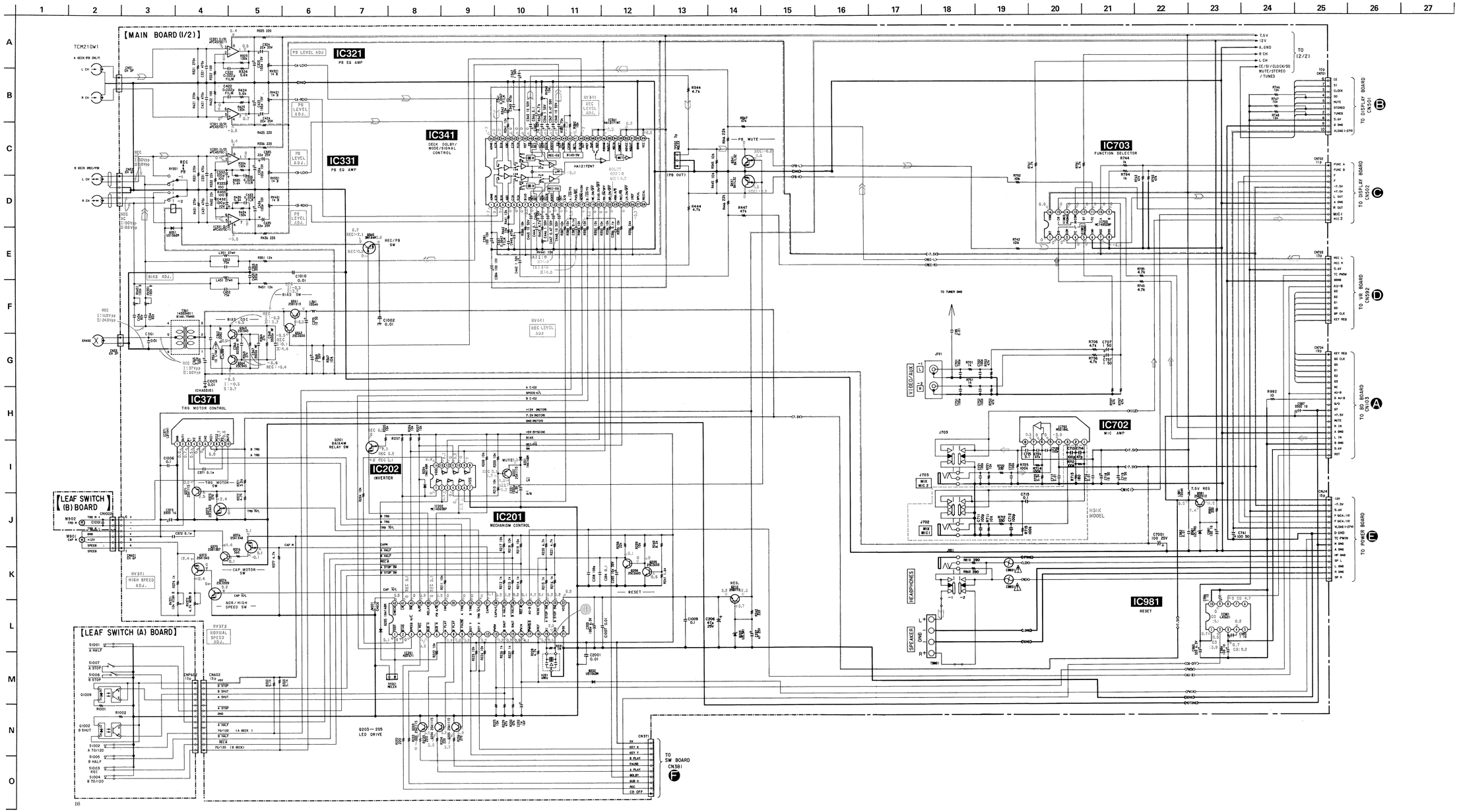
Note on Schematic Diagram :

- **All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.**
- **All resistors are in Ω and ¼ W or less unless otherwise specified.**
- **▭▭: fusible resistor.**

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number sppecified.

- ▭▭▭▭▭▭ : B + Line.
- ▭▭ ▭▭ ▭▭ : B − Line.
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD STOP
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

6-5. SCHEMATIC DIAGRAM — MAIN SECTION — • See page 19 for Wave forms. • See page 39 for IC Block Diagrams.



NOTE:
AUS : Australian model

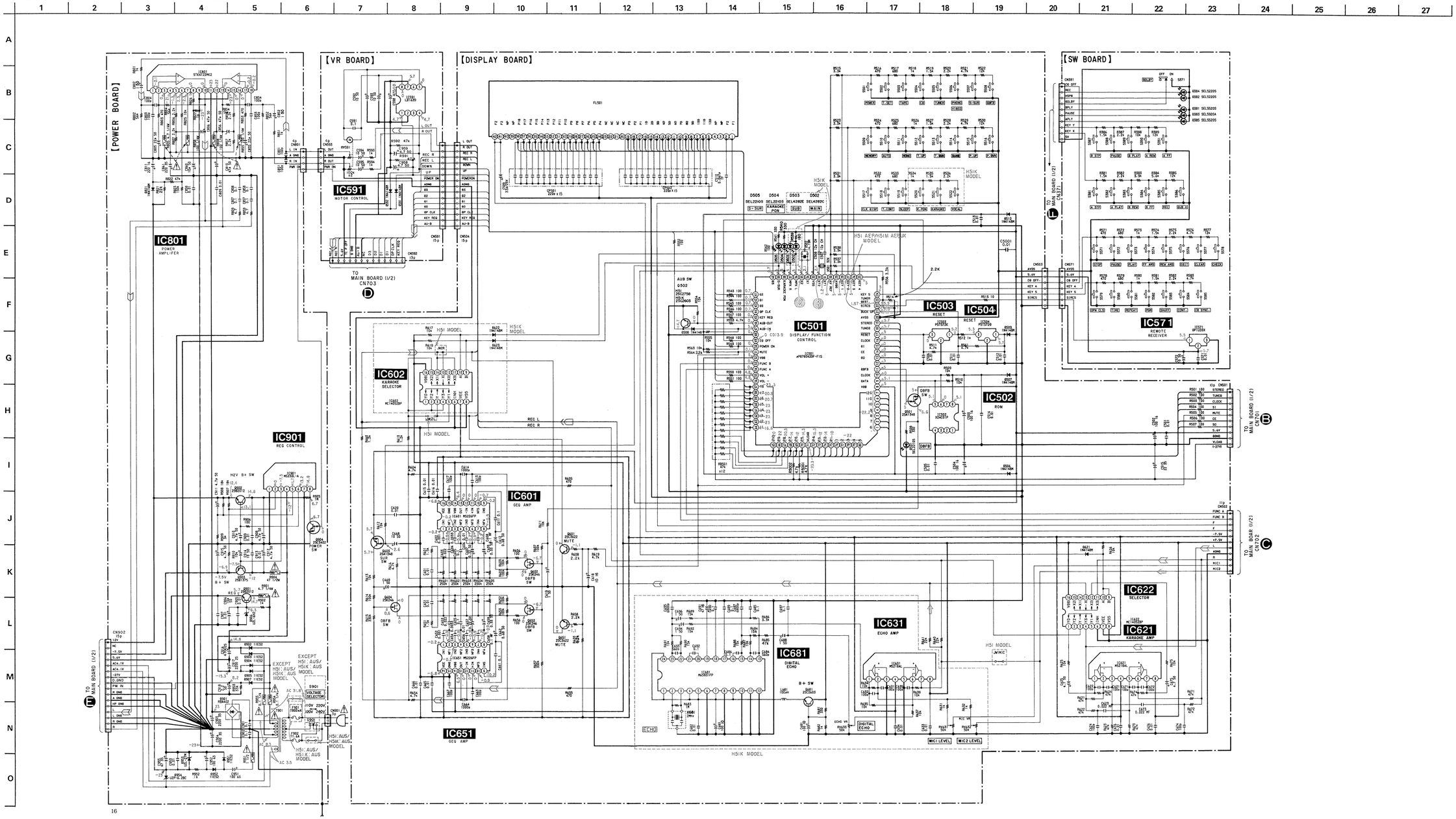
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ⏦ : fusible resistor.

Note:
The components identified by matk ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number sppecified.

- ⏦ : B+ Line.
- ⏦ : B− Line.
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  ( ) : MW
  < > : SW
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ :MIC ⇨ : PB ⇨ : CD
  ⇨ : FM ⇨ : REC

6-8. SCHEMATIC DIAGRAM — DISPLAY SECTION — • See page 19 for Wave forms.



NOTE:
AUS : Australian model

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and], W or less unless otherwise specified.
- ⌇⌇⌇ : fusible resistor.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number sppecified.

- ⟐ ═══ : B+ Line.
- ⟐ ▭▭▭ ▭▭ : B− Line.
- ⟐ [ ] : adjustment for repair.
- ⟐ Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  ( ) : MW
  ' : SW
- ⟐ Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- ⟐ Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- ⟐ Circled numbers refer to waveforms.
- ⟐ Signal path.
  ⇨ :MIC ⇦ : PB ⇨ : CD
  ⇨ : FM ⇨ : REC